tional Parks, Wetlands, Mangroves, Bio sphere Reserves, Hill and Mountain areas, etc.

The 29 projects listed in Schedule-I of the EIA Notification can be broadly categorised under the following sectors for the sake of convenience:

— Industries
— Mining
— Thermal Power Plants
— River Valley
— Ports, Harbours and Airports
— Communication
— Atomic Energy
— Transport (Rail, Road, Highway)
— Tourism (including hotels, beach resorts).

1.1 Industrial Projects

Details of industrial projects that are required to obtain environmental clearance from the Union Ministry of Environment and Forests is as follows:

A. The following industrial activites where the investment is Rs. 50 crores or above:

— Petroleum Refineries including Crude and Product Pipelines;
— Chemical Fertilizers (Nitrogenous and Phosphatic) other than single super-phosphate;
— Petrochemical complexes and petro-chemical intermediates such as DMT, Caprolactum, LAB etc. and production of basic plastics such as LLPDE, HPDE, PP PVC;
— Exploration for oil and gas and their production, transportation and storage;
— Synthetic Rubber;
— Hydrocyanic Acid and its derivatives;
— Primary metallurgical industries; Electric Arc Furnaces;
— Chlor Alkali Industry;
— Viscose staple fibre and filament yarn;
— Storage batteries integrated with manufacture of oxides of lead and lead antimony alloy;
— Pulp, paper and newsprint;
— Cement.

B. The following industrial activites where the investment is Rs. 1 crore and above:

— Pesticides (technical);
— Bulk drugs and pharmaceuticals;
— Asbestos and asbestos products;
— Integrated paint complex including manufacture of resins and basic raw materials required in the manufacture of paints;
— Distilleries,
— Raw skins and hides;
— Dyes;
— Foundries (individual);
— Electroplating.

C. All industrial projects to be located in any of the notified ecologically fragile/ sensitive areas mentioned in para 5.

The industrial licensing mechanism of the Government of India provides that:

— The investor obtains a Letter of Intent (LOI) of certain specific products to be manufactured.
— The LOI is to be converted into an Industrial Licence subject to certain conditions.

Vehicular Air Pollution

*57. SHRI SATISH PRADHAN: Will the Minister of ENVIRONMENT AND FORESTS be pleased to state:

(a) whether it is a fact that vehicular air pollution in metropolis is increasing over the years and has assumed serious proportions;

(b) if so, the details regarding intensity and magnitude of the problem, metropolis-wise;

(c) the details of steps taken during the past 10 years and results achieved thereunder; and

(d) the details of new action plan proposed/launched to deal with the problem and targets set for the current year, metropolis-wise?

MINISTER OF STATE OF THE MINISTRY OF ENVIRONMENT AND FORESTS (CAPT. JAI NARAIN PRASAD NISHAD): (a) Vehicular pollution is the major source of air pollution in the major cities and it is showing a rising trend.

(b) The estimated vehicular pollution load in 12 major cities in 1987 and in 1994 is given below:

S.No.	City	Vehicular Pollution Load (Tonnes per Day)	
		1987	1994
1.	Delhi	871.92	1046.30
2.	Mumbai	548.80	659.57
3.	Bangalore	253.72	304.47
4.	Calcutta	244.77	293.71
5.	Ahmedabad	243.94	292.73
6.	Pune	212.76	255.31
7.	Chennai	188.54	226.25
8.	Hyderabad	169.03	202.84
9.	Jaipur	74.98	88.99
10.	Kanpur	71.99	86.17
11.	Lucknow	69.58	83.49
12.	Nagpur	47.80	57.39

(c) The steps taken during the past 10 years for control of vehicular pollution in the metros include the following:

(i) The Central Motor Vehicles Act, 1939 was amended in 1988 and 1994, wherein provisions for control of automobile pollution were notified.

(ii) Emissions norms were notified in the Central Motor Vehicles Rules in 1989. These include mass emission standards for emissions for both petrol and diesel vehicles of all categories, at the manufacturing stage and gross emission standards for vehicles on-road.

(iii) Emission standards have been progressively tightened for emissions from vehicles at the manufacturing stage. These came into effect on 9.1.1990 and a tighter emission standard was introduced on 1.4.1996. It is proposed to introduce a stricter emission norm from 1.4.2000.

(iv) Ambient air quality standards have been notified in the Air (Prevention and Control of Pollution) Act, 1981 and in the Environment (Protection) Act, 1986. These include standards for major air pollutants for different areas such as residential, industrial, sensitive areas.

(v) The Central Pollution Control Board is monitoring the levels of air pollutants in all the major cities and towns, through a network of 290 ambient air quality monitoring stations under the National Ambient Air Quality Monitoring (NAAQM) Network. The data help understand the trends in air quality. Monitoring of ambient air quality of the major air pollutants indicate that pollutants

such as nitrogen dioxide and sulphur dioxide are within the prescribed limits in most of the cities. Annual average concentrations of suspended particulate matter in the ambient air of a number of cities particularly, some areas of Delhi, Mumbai, Calcutta, Lucknow are beyond the prescribed limits. Annual average concentration of nitrogen dioxide in the ambient air of Calcutta and short-term concentrations at major traffic intersections and high density areas of Delhi are beyond the prescribed limits. Levels of annual average concentrations of sulphur dioxide are also high in Calcutta. Levels of particulate lead in Delhi, after the introduction of low-lead petrol (0.15 grams per litre) are, however showing a decreasing trend.

(vi) Major vehicular pollution surveys have been carried out by the Central Pollution Control Board during 1987 and in 1994 in 12 major cities in the country, namely; Delhi, Mumbai, Bangalore, Calcutta, Ahmedabad, Pune, Chennai, Hyderabad, Jaipur, Kanpur, Lucknow, Nagpur. The surveys have helped understand the levels of pollution in these cities and recommend suitable abatement measures for its prevention and control.

(vii) The Government is implementing a major plan of action for introduction of unleaded petrol and catalytic converter fitted vehicles, introduction of low-sulphur diesel for cleaner diesel vehicles in a phased manner.

(d) The details of new action plan proposed/launched for control of vehicular pollution include the following:

(i) The Government has launched a programme of introduction of low-lead and unleaded petrol throughout the country. As per this programme, low-lead petrol (lead content of less than 0.15 grams per litre of petrol) was supplied in the 4 metros of Delhi, Mumbai, Calcutta and Chennai from June 1994 and it is planned to introduce low-lead petrol in the entire country by 31.12.1996.

(ii) Unleaded petrol (petrol with a lead content of less than 0.013 grams per litre of petrol) was introduced in the 4 metros Delhi, Mumbai, Calcutta and Chennai from 1.4.1995 for the use of new 4-wheeler petrol vehicles fitted with catalytic converters introduced in these metros from this date. It is proposed to extend the programme to cover all the major cities including capitals of all States and UTs from 31.12.1998 and throughout the country from 1.4.2000. With the implementation of this programme, the levels of all the major pollutants such as carbon monoxide, hydrocarbons, oxides of nitrogen and particulate lead are expected to be reduced.

(iii) A similar programme at the national level has been launched for the introduction of low-sulphar diesel. In the first phase, low-sulphur diesel (of 0.5% sulphur) was introduced in the 4 metros of Delhi, Mumbai, Calcutta and Chennai with effect from 1.4.1996 and 0.25% sulphur diesel has been introduced in the Taj Trapezium from 1.9.1996. It is planned to introduce low-sulphur diesel of 0.25% sulphur in the entire country from 1.4.1999. With the implementation of this programme the levels of particulate emissions from diesel vehicles are expected to be reduced.

(iv) Tighter emission standards were introduced on 1.4.1996 for all categories of petrol and diesel

vehicles and is to made stricter from 1.4.2000. This would help introduce cleaner vehicles involving upgradation of technologies to reduce emissions from vehicles.

(v) Control of vehicular pollution is implemented through the respective State Transport Departments of various States. The Central Government has advised the various states to enforce the standards for emissions from on-road vehicles and create awareness amongst the general public on the various aspects such as maintenance of vehicles, health effects of vehicular pollution and punitive measures for violations of emission standards for onroad vehicles. It has been recommended that public transport should be stregthened and mass transport system introduced in all the major cities.

Role of ICAR in the Field of Crop Improvement

*58. SHRIMATI BASANTI SARMA: DR. SHRIKANT RAM-CHANDRA JICHKAR:

Will the Minister of AGRICULTURE be pleased to state:

(a) what activities were undertaken by the ICAR in the area of crop improvement;

(b) whether isolation of varieties with high degree of resistance to insect pests and diseases were identified and if so, what are they; and

(c) how will this research be gainfully exploited for the benefit of farmers?

THE MINISTER OF AGRICULTURE (SHRI CHATURANAN MISHRA): (a) In the area of crop improvement, the ICAR aims at consolidated of yield of currently available varietal technology for irrigated ecology, maximisation of yield of rainfed crops, extending hybrid technology to new crops and niches, improvement of export oriented crops, development of cost effective package of crop production/protection practices, nucleus breeder seed production and collection, conservation and documentation of agribiodiversity.

(b) Yes, Sir, The Council has released for general cultivation a total of 452 high yielding varieties/hybrids of various field crops during the VIII Five Year Plan. List of improved varieties of different field crops with resistance to insect pests and diseases, as also other released varieties are enclosed as Statement (*See* below).

(c) The new high yielding disease and insect pest resistant varieties will be popularised among the farmer to enchance their crop productivity and economic returns.